

Docket No. F-8567

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AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1. - 6. (Canceled)

7. (Currently Amended) An inductive momentary-contact switch comprising:

a locking mechanism;

a sensor unit including a printed circuit board having a sensor coil disposed thereon, and a conductive actuator element supported by said locking mechanism and displaceable relative to said sensor coil, and said sensor coil having a self-inductance which is predominantly determined by a distance between said conductive actuator and said sensor coil wherein a change in said distance produces a self-inductance change; [[and]]

an evaluation circuit [[,]] configured to produce an oscillating signal in said sensor such that

~~— wherein said sensor unit comprises a sensor coil applied to a printed circuit board and a conductive actuator element, wherein~~

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~~the distance between said conductive actuator element and said sensor coil is changeable and lockable, the distance changes being made for the purpose of changing the inductance of said sensor coil, and~~

— ~~the self-inductance inductance change in said sensor coil initiates a switching function in said evaluation circuit based on changes in said oscillation signal caused by the self-inductance change.~~

8. (Currently Amended) An inductive position switch apparatus comprising:

a gearshift lever;

an actuator slide;

a sensor unit including a printed circuit board having at least first and second sensor coils disposed thereon adjacent each other in a common plane, and a conductive actuator element slidably supported by said actuator slide and movable by said gearshift lever, and disposed displaceable relative to said first and second sensor coils, and said first and second sensor coils respectively having first and second self-inductances which are predominantly determined by first and second relative positionings of said conductive actuator relative to a respective one of said first and second sensor coils wherein a change in said first and second relative positionings produces respectively first and second self-

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inductance changes in respective ones of said first and second sensor coils :

[[and]]

an evaluation circuit configured to produce first and second oscillation signals in said first and second sensor coils, detect first and second signal changes in said first and second oscillation signals produced by said first and second self-inductance changes, and initiate a switching function based on a combination of said first and second signal changes; and — wherein —

— said sensor unit comprises at least two sensor coils adjacent to one another on a printed circuit board and at least one conductive actuator element applied to said actuator slide;

the coverage of the conductive actuator element being configured to simultaneously partially cover of every two of said first and second sensor coils and be movable relative to said first and second sensor coils to vary coverage such that a movement of said conductive actuator element produces said first and second signal changes as changes of a signal characteristic, and said first signal change is a change in said characteristic in an opposing direction of increase and decrease in comparison to changes of said characteristic in said second signal change based on a same movement of said conductive actuator is changeable for changing the inductance of the sensor coils by displacing said actuator slide, and

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~~the inductance changes of said adjacently applied sensor coils initiate switching functions in said evaluation circuit.~~

9. (Currently Amended) The inductive position switch apparatus in accordance with claim 8 further comprising a multiplexer [[,]] for selectively coupling said first and second sensor coils with the signal evaluation circuit for detection of said first and second oscillation signals of said sensor coils occurring via said multiplexer.

10. (Currently Amended) The [[An]] inductive position switch apparatus in accordance with claim 9 comprising:

~~a gearshift lever;~~
~~an actuator slide;~~
~~a sensor unit; and~~
~~an evaluation circuit, wherein~~
~~said sensor unit comprises at least two sensor coils applied adjacent to one another to a printed circuit board;~~
~~said actuator slide comprises at least one conductive actuator element,~~

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~~the coverage of said conductive actuator element of every two of said sensor coils is changeable for changing the inductances of said sensor coils by displacing said actuator slide,~~

~~the inductance changes of said adjacently applied sensor coils initiate switching functions in said evaluation circuit, and~~

wherein only one of said first and second sensor coils is switched at any one time into said evaluation circuit and successive evaluations of said characteristic of said first and second signals are compared with each other in order to form a temperature-stable and precise switching criterion.

11. (Currently Amended) The inductive position switch apparatus in accordance with claim 10 further comprising an LC oscillating circuit, wherein said LC oscillating circuit ~~comprises~~ ~~said at least two sensor coils~~ successively applied to said first and second sensor coils.

12. (Currently Amended) The inductive position switch apparatus in accordance with claim 11 adapted for evaluating ~~[[the]]~~ a resonance frequency of the LC oscillating circuit ~~into which the variable inductance enters~~ as said characteristic of said first and second signals.

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13. (Currently Amended) An inductive switching apparatus comprising:
a positioning device including at least one of a locking mechanism or a
latchable gearshift lever;

a sensor unit including a printed circuit board having at least first and
second sensor coils disposed thereon adjacent each other in a common plane,
and a conductive actuator element movably supported by said positioning
device, and disposed displaceable relative to said first and second sensor coils,
and said first and second sensor coils respectively having first and second self-
inductances which are predominantly determined by first and second relative
positionings of said conductive actuator relative to a respective one of said first
and second sensor coils wherein a change in said first and second relative
positionings produces respectively first and second self-inductance changes in
respective ones of said first and second sensor coils; and

an evaluation circuit configured to produce first and second oscillation
signals in said first and second sensor coils, detect first and second signal
changes in said first and second oscillation signals produced by said first and
second self-inductance changes, and initiate a switching function based on at
least one of said first and second signal changes; wherein

said sensor unit comprises at least one sensor coil disposed on a printed
circuit board and at least one conductive actuator element,

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said switching function being based on at least one of:

said first and second relative positionings setting first and second distances between the distance of said conductive actuator element to one of said first and second sensor coils along a direction normal to a plane of said first and second sensor coils
~~said at least one sensor coil for~~

said first and second relative positionings being set by the conductive actuator element being configured to simultaneously partially cover said first and second sensor coils and be movable relative to said first and second sensor coils to vary coverage which is overlap of said first and second coils in said normal direction to said plane of said first and second coils such that a movement of said conductive actuator element produces said first and second signal changes as changes of a signal characteristic, and said first signal change is a change in said characteristic in an opposing direction of increase and decrease in comparison to changes of said characteristic in said second signal change based on a same movement of said conductive actuator

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~~coverage of every two of said at least one sensor coil is changeable for changing the inductance of said at least one sensor coil, and~~
~~the changes in inductance in the evaluation circuit initiate switching functions.~~

14. (Currently Amended) The inductive switching apparatus in accordance with claim 13 further comprising an actuator slide, the coverage of ~~every two of said at least one sensor coil~~ said first and second sensor coils occurring by ~~horizontal position~~ displacement of said actuator slide in a direction parallel to said plane of said first and second coils.

15. (Currently Amended) The inductive switching apparatus in accordance with claim 13 wherein only one of said first and second sensor coils ~~at least one sensor coil~~ is switched at any one time into said evaluation circuit and successive evaluations of said characteristic of said first and second signals are compared with each other in order to form a temperature-stable and precise switching criterion.

16. (Currently Amended) The inductive switching apparatus in accordance with claim 13 further comprising a multiplexer [[,] for selectively

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coupling said first and second sensor coils with the signal evaluation circuit for detection of said first and second oscillation signals of said sensor coils occurring via said multiplexer.

17. (Currently Amended) The inductive switching apparatus in accordance with claim 15 further comprising a multiplexer [[,]] for selectively coupling said first and second sensor coils with the signal evaluation circuit for detection of said first and second oscillation signals of said sensor coils occurring via said multiplexer.

18. (Withdrawn - Currently Amended) The inductive momentary-contact switch in accordance with Claim 7, wherein an alternating voltage of constant amplitude and constant frequency is injected into said sensor coil with subsequent evaluation of [[the]] current amplitudes of the oscillation signal caused by said self-inductance change of the variable inductance.

19. (Withdrawn - Currently Amended) The inductive position switch apparatus in accordance with Claim 8, wherein an alternating voltage of constant amplitude and constant frequency is injected into said sensor coil first and second sensor coils with subsequent evaluation of [[the]] current amplitudes

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of said first and second signals caused by the first and second self-inductance
changes the variable inductance.

20. (Withdrawn - Currently Amended) The inductive switch apparatus in accordance with Claim 13, wherein an alternating voltage of constant amplitude and constant frequency is injected into said ~~sensor coil~~ first and second sensor coils with subsequent evaluation of [(the)] current amplitudes of said first and second signals caused by the first and second self-inductance
changes the variable inductance.

21. (Currently Amended) The inductive switching apparatus in accordance with claim 14, wherein only one of said first and second sensor coils ~~at least one sensor coil~~ is switched at any one time into said evaluation circuit and successive evaluations of said characteristic of said first and second signals are compared with each other in order to form a temperature-stable and precise switching criterion.

22. (Currently Amended) The inductive switching apparatus in accordance with claim 14 further comprising a multiplexer [(.]) for selectively coupling said first and second sensor coils with the signal evaluation circuit for

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detection of said first and second oscillation signals of said sensor coils
occurring via said multiplexer.

23. (Currently Amended) The inductive switching apparatus in accordance with claim 21 further comprising a multiplexer [f.1] for selectively coupling said first and second sensor coils with the signal evaluation circuit for
detection of said first and second oscillation signals of said sensor coils
occurring via said multiplexer.

24. (Currently Amended) The inductive position switch apparatus according to claim 8, wherein ~~said inductive position switch apparatus is configured such that said inductance change initiates said switching function based on said characteristic is frequency a circuit frequency change caused by said inductance change.~~

25. (Currently Amended) The inductive position switch apparatus according to claim 8, further comprising an LC oscillating circuit, wherein said LC oscillating circuit comprises ~~said sensor coil~~ is successively applied to said first and second sensor coils.

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26. (Cancelled)

27. (Currently Amended) The inductive position switch apparatus according to claim 9, wherein ~~said inductive position switch apparatus is configured such that said inductance change initiates said switching function based on a circuit frequency change caused by said inductance change~~ said characteristic is frequency.

28. (Currently Amended) The inductive position switch apparatus according to claim 9, further comprising an LC oscillating circuit, wherein said LC oscillating circuit comprises ~~said sensor coil~~ is successively applied to said first and second sensor coils.

29. (Cancelled)